Absence Unexcused: Ending Teacher Shortages in High-Need Areas. Evaluating the Pathways to Teaching Careers Program. 

The Pathways to Teaching Careers Program was evaluated over the course of 6 years. The program worked with colleges and universities to develop effective strategies for recruiting and preparing teachers to complete all requirements for teacher certification leading to full-time jobs. Partnerships between the universities and local school districts ensured that the new teachers were being prepared for assignments that the schools really needed. In turn, the districts agreed to help place graduates in high-need schools. This evaluation of Pathways surveyed participants, program staff, teaching supervisors, and principals to examine whether it met its recruitment goals, retained participants in the program through certification, graduated good teachers, and helped retain teachers. Results indicated that Pathways surpassed its numeric recruitment goals, showing that a significant pool of qualified non-traditional candidates exists. The completion rate for Pathways participants was higher than the national rate for students in traditional preservice programs. Pathways graduates taught in the targeted school districts or schools at very high rates. Graduates were perceived by their supervisors, principals, and an independent assessor to be more effective as teachers than typical beginning teachers. Pathways graduates were more likely to remain in teaching for at least 3 years than typical beginning teachers. (Contains 14 references.) (SM)
States and local school districts are scrambling to ensure a steady supply of high-quality teachers. For many of these school districts—especially those in urban areas, where it hurts the most—the teacher shortage has already arrived. And these shortages are intensified in selected fields, such as bilingual education and special education, and in subjects such as mathematics and science.

Exacerbating the problem is the growing racial/ethnic imbalance between the student population and the teaching force. While the K-12 population has become increasingly diverse over the last two decades—students of color comprise over one-third of school enrollments—the teaching force in public schools has remained one-tenth minority. This imbalance could have serious social and academic repercussions for the most rapidly growing segment of the student population, because teachers of color can act as role models and cultural brokers to mediate differences between home and school that may obstruct learning. There is also growing evidence that educational benefits may accrue to black and Latino students with same-race teachers.

Some states and local districts have enacted policies to stem the exodus of older, more experienced teachers by offering them incentives to delay retirement. Other policies are designed to increase retention rates by raising teachers' salaries and other benefits and improving working conditions. A third approach involves stepping up recruitment from nontraditional pools of teachers. The Wallace-Reader's Digest Fund's Pathways to Teaching Careers Program exemplifies this approach. Pathways worked with colleges and universities to develop effective strategies for recruiting and preparing teachers to complete all requirements for teacher certification—including obtaining bachelor's or master's degrees—leading to full-time teaching jobs. Partnerships between the universities and local school districts ensured that the new teachers were being prepared for assignments the schools really needed. In turn, the districts agreed to help place the graduates in high-need schools.
Has the Pathways Program been effective? The evaluation findings lead us to conclude the following:

- Pathways has surpassed its numeric recruitment goals, showing that a substantial pool of qualified nontraditional candidates exists and is ready to enter a demanding preparation program.
- The completion rate for Pathways participants has been higher than the national rate for students in traditional teacher education programs.
- Once they complete the program, Pathways graduates teach in targeted school districts or urban/rural districts at very high rates.
- Pathways graduates are perceived by their supervisors, their principals, and a trained, independent assessor to be more effective as teachers than the typical beginning teacher in their schools.
- Pathways graduates are more likely to remain in teaching for at least three years than the typical beginning teacher.

A Description of the Pathways to Teaching Careers Program

The goal of this $50 million national initiative by the Wallace Funds was to increase the number of well-prepared, fully certified teachers—characteristics identified by participating school districts—working in high-need school districts. A majority of the school districts chose teachers from racial/ethnic minority backgrounds as a focus for recruitment efforts. Although the initiative comprised four program strands, each targeting a different population, this report focuses on the evaluation of two of these strands that together make up the most comprehensive components of the initiative: the paraprofessionals and noncertified teachers strand and the Peace Corps Fellows strand.

The paraprofessionals and noncertified teachers strand is the most comprehensive of the four. It consists of 26 programs aimed at identifying and recruiting paraprofessionals and noncertified teachers working in public schools and offering them scholarships and other support services to obtain bachelor’s or master’s degrees and/or meet other requirements for full state certification. In return, participants agree to continue teaching in the public schools for a specified period of time after completing the program.

The Peace Corps Fellows strand includes 14 projects, all of which are coordinated by the Peace Corps Fellows USA Program. The aim of this strand is to identify and support potential teacher candidates from among returning Peace Corps volunteers. The projects place selected Fellows in full-time, salaried positions in urban and rural school districts and provide a two-year graduate-level program leading to teaching certification and a master’s degree.

The Pathways Evaluation

The Pathways to Teaching Careers Program was evaluated over the course of six and a half years, beginning in 1994. Although the evaluation was divided into components—
EVALUATING THE PATHWAYS TO TEACHING CAREERS PROGRAM

summative, process, and formative—this report focuses on the summative component. Results of the formative and process evaluations have been reported elsewhere. The summative evaluation was designed to collect data over a six-year period to answer the following questions:

1. Did the Pathways Program meet its overall recruitment goals?
2. Have Pathways participants remained in the program through completion and certification? Once they completed the program, did they work in targeted districts?
3. Are Pathways graduates good teachers?
4. Do Pathways graduates remain in teaching longer than the typical novice teacher?

To answer these questions, we collected data mainly through surveys of participants, program staff, teaching supervisors, and principals. Performance assessment data were also collected by evaluation staff. To this end, five surveys were administered each year. In years four and five we collected data on Pathways graduates who had completed the program three or more years earlier to determine their retention in teaching over a three-year period. Data were stored in a complex relational database that could be converted to SAS for analysis. Details regarding the methods used in this evaluation, including descriptions of the surveys, response rates, and analysis of survey data, are given in our full report, "Evaluation of the Pathways to Teaching Careers Program."

Program Outcomes

Here we present data to answer the four questions posed by the summative evaluation. We organized the findings by participant type (e.g., emergency-certified/substitute teachers, paraprofessionals, and Peace Corps Fellows) because we feel that such a breakdown is useful in interpreting the effects of the program on the three nontraditional groups served by Pathways.

1. Did the Pathways Program meet its overall recruitment goals?
Yes. The Pathways Program's numerical recruitment goal was 2,200 individuals. By the end of the 1999–2000 academic year, the program had recruited and served 2,593 participants, exceeding its goal by 393 people (18 percent).

A related recruitment goal in most districts was to enroll a diverse group of participants in order to increase the diversity of the teaching pool. Table 1 compares the demographic characteristics of Pathways participants with those of the pool of newly prepared teachers.

The table shows that the program increased the number of potential minority teachers by almost 15 percent, while increasing the pool of newly prepared teachers overall by 4.4 percent. The program was not as successful in increasing the number of male teachers, a secondary focus of recruitment efforts.

The three subgroups served by the Pathways Program differ among themselves. Table 2, which gives a demographic profile of each group, shows that the emergency-certified/substitute teacher and paraprofessional groups are much more similar to one
### TABLE 1
Contribution of Pathways Participants to the Diversity of the Teacher Pool: Demographic Characteristics of Pathways Participants and Newly Prepared Teachers

<table>
<thead>
<tr>
<th>Demographic Characteristics</th>
<th>Pathways Participants</th>
<th>Newly Prepared Teachers</th>
<th>Teacher Pool Increase (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>580</td>
<td>15,956</td>
<td>3.7</td>
</tr>
<tr>
<td>Female</td>
<td>1,353</td>
<td>43,142</td>
<td>3.2</td>
</tr>
<tr>
<td><strong>Minority Status</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minority</td>
<td>1,559</td>
<td>10,638</td>
<td>14.7</td>
</tr>
<tr>
<td>Nonminority</td>
<td>743</td>
<td>48,460</td>
<td>1.6</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean Age</td>
<td>35</td>
<td>28</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>(N = 1,933)</td>
<td>(N = 59,098)</td>
<td>4.4</td>
</tr>
</tbody>
</table>

Source: Data on Pathways Participants from the Scholar/Fellow Survey (N = 1,933) and Participant Progress Form (N = 2,475); data on newly prepared teachers from Broughman and Rollefson (2000). Seven percent (173) of the 2,475 participants who responded to the Participant Progress Form (PPF) declined to identify their race/ethnicity and are therefore missing from the total N.

### TABLE 2
Demographic Profile of Pathways Participants by Status

<table>
<thead>
<tr>
<th>Emergency-Certified/ Substitute Teachers (%)</th>
<th>Paraprofessional/ Teacher Aide (%)</th>
<th>Peace Corps Fellows (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(N = 840)</td>
<td>(N = 633)</td>
<td>(N = 460)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mean Age, 1996</th>
<th>35</th>
<th>38</th>
<th>31</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>74</td>
<td>82</td>
<td>50</td>
</tr>
<tr>
<td>Male</td>
<td>26</td>
<td>19</td>
<td>50</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>12</td>
<td>18</td>
<td>81</td>
</tr>
<tr>
<td>African American</td>
<td>61</td>
<td>61</td>
<td>3</td>
</tr>
<tr>
<td>Latino/a</td>
<td>15</td>
<td>13</td>
<td>3</td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>40</td>
<td>29</td>
<td>73</td>
</tr>
<tr>
<td>Married</td>
<td>43</td>
<td>51</td>
<td>22</td>
</tr>
<tr>
<td>Divorced</td>
<td>12</td>
<td>14</td>
<td>3</td>
</tr>
<tr>
<td>Mean Number of Children</td>
<td>1</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

Source: Data on age, marital status, and number of children from the Scholar/Fellow Survey; racial/ethnic data, from the Participant Progress Form.
another than to the Peace Corps Fellows group. In fact, Peace Corps Fellows resemble the national profile of the traditional beginning teacher more than their Pathways counterparts do.

2. Have Pathways participants remained in the program through certification? Once they completed the program, did they work in targeted districts?
The answer to both questions is yes. Pathways participants' rate of completion of teacher certification requirements was, at 75 percent (figure 1), higher than the national completion rate for traditional teacher education students, 60 percent.14

Once they completed the Pathways Program, 84 percent of graduates worked in teaching jobs in targeted school districts (figure 2). Of those working in nontargeted districts, 81 percent worked in urban or rural districts. Ninety-one percent of paraprofessionals taught in targeted districts, while 82 percent of Peace Corps Fellows and 75 percent of emergency-certified/substitute teachers did so.

3. Are Pathways graduates good teachers?
Data on teaching effectiveness across three instruments indicate that Pathways graduates were perceived to be effective teachers by three independent assessors working at three different stages: field experience supervisors, who rated graduates after the student teaching experience; principals, who rated them two years after completion of the program; and an independent evaluator, who used a performance assessment system (Praxis III) to rate a sample of graduates at the end of the first year of teaching. These data are generally consistent: Pathways teachers received higher ratings from principals and...
from the assessor using PRAXIS III than did their typical counterparts (table 3). These differences are statistically significant at the .0001 level.

4. Do Pathways graduates remain in teaching longer than the typical novice teacher?
A follow-up survey administered to Pathways graduates who had completed the program three or more years before showed that 81 percent had remained in teaching for at least three years after completing the program, although 8 percent of these (or 6 percent of all respondents) had left teaching after three years. This rate of retention in teaching is higher than the national three-year retention rate of 71 percent for newly prepared teachers.8 Eighty-eight percent of those who had graduated at least three years ago, including those in teaching, were still employed in education at the time of the survey. Figure 3 shows Pathways graduates’ employment three years or more after they had completed the program.

Figure 4 compares Pathways completers who have remained in teaching after three years and those who left teaching after at least three years. Paraprofessionals were the most likely of the three groups to have remained in teaching for three years and to have continued in teaching after the three-year period. White graduates were the most likely of all racial/ethnic groups to have left teaching after three years and the least likely to have continued in teaching after three years.

While the majority of Pathways graduates who remained in teaching after three years work in urban areas, paraprofessionals and emergency-certified/substitute teachers were much more likely than Peace Corps Fellows to be teaching in urban schools, even taking into account Fellows in rural schools, a focus of the Peace Corps Fellows strand. Minority graduates were more likely to teach in urban areas than their white counterparts, while white graduates were more likely to teach in suburban and rural areas (tables 4 and 5).
<table>
<thead>
<tr>
<th>Rating Categories</th>
<th>Emergency-Certified/Substitute (N = 159)</th>
<th>Paraprofessional/Teacher Aide (N = 123)</th>
<th>Peace Corps Fellows* (N = 53)</th>
<th>Total (N = 335)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizing content knowledge for student learning</td>
<td>3.2 Pathways 4.0</td>
<td>3.3 Pathways 3.8</td>
<td>3.2 Pathways 4.3</td>
<td>3.2 Pathways 3.9</td>
</tr>
<tr>
<td>Creating an environment for student learning</td>
<td>3.4 Pathways 4.2</td>
<td>3.5 Pathways 4.0</td>
<td>3.4 Pathways 4.4</td>
<td>3.4 Pathways 4.1</td>
</tr>
<tr>
<td>Teaching for student learning</td>
<td>3.5 Pathways 3.9</td>
<td>3.4 Pathways 3.8</td>
<td>3.2 Pathways 4.2</td>
<td>3.3 Pathways 3.9</td>
</tr>
<tr>
<td>Professionalism</td>
<td>3.4 Pathways 4.0</td>
<td>3.5 Pathways 4.0</td>
<td>3.3 Pathways 4.3</td>
<td>3.5 Pathways 4.0</td>
</tr>
<tr>
<td>Overall assessment of teacher effectiveness</td>
<td>3.3 Pathways 4.0</td>
<td>3.4 Pathways 3.9</td>
<td>3.3 Pathways 4.3</td>
<td>3.3 Pathways 4.0</td>
</tr>
</tbody>
</table>

Source: Follow-Up Survey of Pathways Graduates/Completers.

Scale: 1 = lowest 5 = highest

*N is too small to compute significance levels.
Policy Recommendations

What policy implications can be drawn from these conclusions?

- **Recruiting new teachers from nontraditional pools is an effective way of increasing the national supply of teachers.** The Pathways experience has shown that there is a large pool of nontraditional individuals who have the desire and ability to become effective teachers for both urban and rural high-need districts. Federal, state, and local policies should support programs that recruit from nontraditional pools as a way of increasing both the number of teachers for high-need areas and the diversity of the teaching pool.

- **Paraprofessionals are a rich source of potential teachers.** Paraprofessionals, if selected carefully and given appropriate support, are as likely as members of other nontraditional groups to complete a teacher-education program and become effective educators. Two additional benefits of recruiting paraprofessionals are that they are more likely to teach and to remain in teaching in high-need districts and that they are more likely to be members of racial/ethnic minority groups. Federal, state, and local initiatives to increase the teaching force should make a serious effort to include paraprofessionals. Paraprofessionals' greater likelihood of remaining in teaching in high-need areas more than offsets the higher cost of preparing them for certification.

- **The Pathways model, which provides a program of preparation and support specifically tailored to the nontraditional groups being served, is an effective and affordable way to increase the teaching force's size and diversity.** The Pathways model, thoroughly described in *Ahead of the Class: A Handbook for Preparing New Teachers from New Sources* (Clewell and Villegas 2001a), can be considered an alter-
FIGURE 4
Comparison of Pathways Completers Who Are Still in Teaching after at Least Three Years, and Those Who Left Teaching After at Least Three Years, by Status and Race/Ethnicity

Source: Follow-Up Survey of Pathways Graduates/Completers.

TABLE 4
Setting of Pathways Three-Year Graduates Employed in a Full-Time Job in Teaching, by Status*

<table>
<thead>
<tr>
<th>Setting</th>
<th>Emergency-Certified/Substitute</th>
<th>Paraprofessional/Teacher Aide</th>
<th>Peace Corps</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent</td>
<td>N</td>
<td>Percent</td>
<td>N</td>
</tr>
<tr>
<td>Urban</td>
<td>82</td>
<td>216</td>
<td>88</td>
<td>145</td>
</tr>
<tr>
<td>Suburban</td>
<td>12</td>
<td>32</td>
<td>10</td>
<td>16</td>
</tr>
<tr>
<td>Rural</td>
<td>5</td>
<td>14</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Follow-Up Survey of Pathways Graduates/Completers.
* Cells with N counts of 5 or less have been suppressed to preserve confidentiality.
TABLE 5
Setting of Pathways Three-Year Graduates Employed in a Full-Time Job in Teaching, by Race/Ethnicity*

<table>
<thead>
<tr>
<th>Setting (N = 640)</th>
<th>White</th>
<th>Percent</th>
<th>N</th>
<th>African American</th>
<th>Percent</th>
<th>N</th>
<th>Hispanic</th>
<th>Percent</th>
<th>N</th>
<th>Asian, American Indian, and Other</th>
<th>Percent</th>
<th>N</th>
<th>Total</th>
<th>Percent</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td></td>
<td>65</td>
<td>154</td>
<td>88</td>
<td>264</td>
<td>89</td>
<td>62</td>
<td>28</td>
<td>79</td>
<td>508</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suburban</td>
<td></td>
<td>22</td>
<td>53</td>
<td>9</td>
<td>28</td>
<td>11</td>
<td>8</td>
<td>—</td>
<td>14</td>
<td>92</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td></td>
<td>12</td>
<td>29</td>
<td>3</td>
<td>9</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>6</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Cells with N counts of 5 or less have been suppressed to preserve confidentiality.

Source: Follow-Up Survey of Pathways Graduates/Completers.

Endnotes

9. For a thorough review of recruitment programs and policies, see Clewell et al. (2000).
11. The formative component provided timely feedback to individual programs as well as the Fund to guide the design of future teacher recruitment and preparation activities. The results of the process component have been published in a separate document, Ahead of the Class: A Handbook for Preparing New Teachers from New Sources.
12. Response rates ranged from 63 percent to 95 percent.
15. Ingersoll (2000).
16. A study of the cost of implementing the Pathways model at a public institution estimates a cost in the range of $7,380 to $21,713 per student for noncertified/substitute teachers/Peace Corps Fellows, and $14,814 to $22,855 for paraprofessionals (see Ahead of the Class for details).
References


About the Authors

Beatriz Chu Clewell is a principal research associate at the Urban Institute, where she directs the Evaluation Studies and Equity Research Program in the Education Policy Center. She has conducted a number of evaluations of teacher recruitment programs, including that of the Pathways to Teaching Careers Program, for which data on 42 programs and close to 3,000 participants over a six-year period were collected. Dr. Clewell has also published several reports and articles on teacher recruitment and teacher quality, including a special issue of Education and Urban Society on diversifying the teaching force in urban school systems (Ana Maria Villegas, coauthor). Before joining the Urban Institute, she was a senior research scientist at the Educational Testing Service's Education Policy Research Division.

Ana Maria Villegas is a professor of education at Montclair State University, where she teaches courses on urban education and quantitative research methods. Prior to joining the school, she was a senior research scientist with the Education Policy Research Division of the Educational Testing Service. Dr. Villegas has extensive experience with evaluation research, particularly as it pertains to programs of teacher preparation. In addition to codirecting the Pathways evaluation, she has directed a national investigation of in-service programs for teachers of language minority students. She also codirected several other evaluation studies of programs designed to increase the number of well-prepared teachers, especially candidates of color. Dr. Villegas has published widely on topics such as assessing teacher performance in a diverse society, preparing teachers for a changing student population, and culturally responsive teaching.
This is a summary of the findings of a six-year evaluation of the Pathways to Teaching Careers Program, which was funded by the Wallace-Reader's Digest Funds. Beatriz Chu Clewell and Ana Maria Villegas are co-principal investigators of the evaluation, which documents and reports the major outcomes of the program. The evaluation was funded and commissioned by the Wallace Funds.

From 1993 to 2000, the Urban Institute collected data on the progress of over 2,500 participants in 40 Pathways programs across the United States. Case study data on all 40 programs were also collected during this period. This brief reports the findings of the summative component of the evaluation, which was based largely on the results of several surveys administered to all programs, participants, and others involved in the Pathways Program. The summative component looks at the program's success in meeting its overall recruitment goals; retaining participants in the program through completion and teacher certification; placing program graduates in targeted, high-need districts; producing effective teachers; and producing teachers who remain in the teaching profession.

For more information on the evaluation, see Ahead of the Class: A Handbook for Preparing New Teachers from New Sources (Clewell and Villegas, 2001; available from the Urban Institute) and Evaluation of the DeWitt Wallace-Reader's Digest Fund's Pathways to Teaching Careers Program.

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